

ABSTRACT OF THE DISCLOSURE

An ultraviolet photocatalytic oxidation device includes at least one first ultraviolet light source and at least one second ultraviolet light source. The ultraviolet light sources are all switched off when a fan for the HVAC system is switched off. In another feature of the present invention, while the evaporator coil is on, all of the ultraviolet light sources are turned on. Because the ultraviolet light sources are more effective when the evaporator coil is off, some of the ultraviolet light sources are turned off while the evaporator coil is off. While the evaporator coil is off, the ultraviolet light sources may be switched on alternately, such that they are on each on a substantially equal portion of the time that the evaporator coil is off.